Concept Attainment

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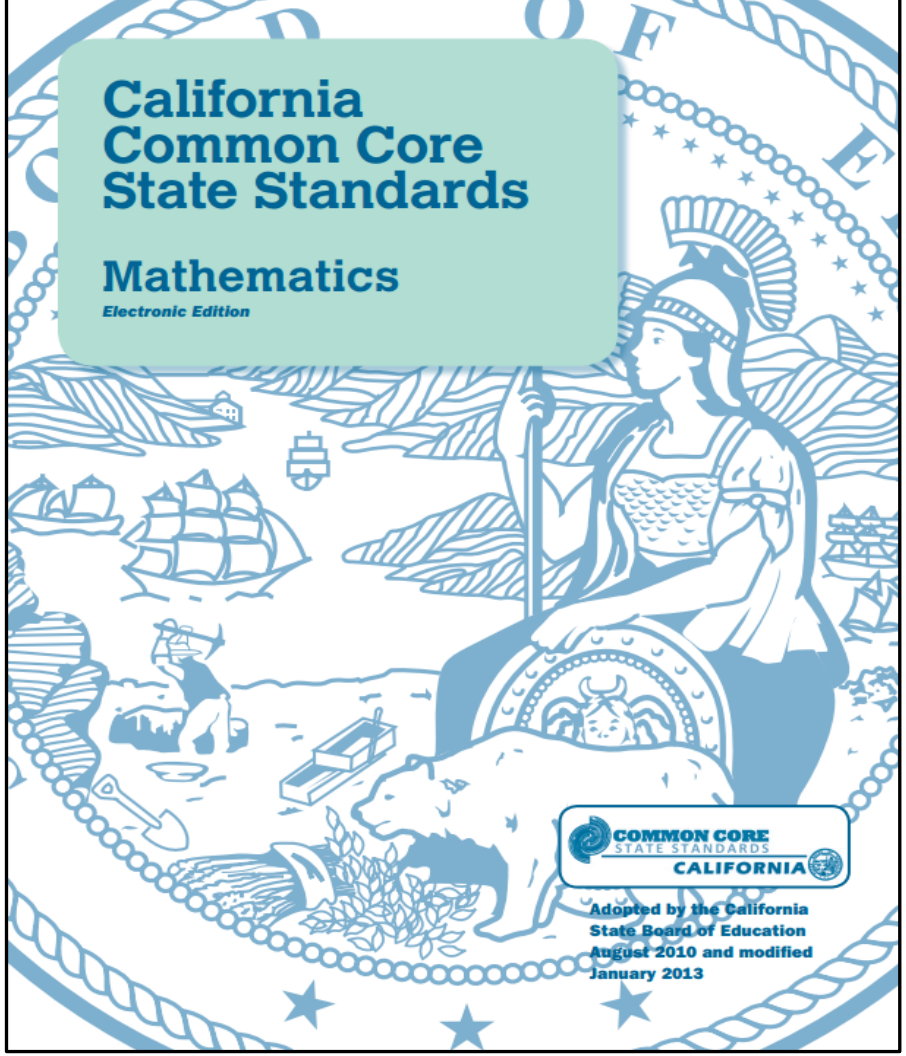


Concept Attainment Model: Concept attainment is an interactive, **inductive** model of teaching and learning that asks students to categorize ideas or objects according to critical attributes. During the lesson, teachers provide examples and non-examples, and then ask students to (1) develop and test hypotheses about the exemplars, and (2) analyze the thinking processes that were utilized. To illustrate, students may be asked to categorize polygons and non-polygons in a way that is based upon a pre-selected definition. Through concept attainment, the teacher is in control of the lesson by selecting, defining, and analyzing the concept beforehand and then encouraging student participation through discussion and interaction. This strategy may be used to introduce, strengthen, or review concepts, and as formative assessment (Charles and Senter 2012).

Concept Attainment
(Interactive)

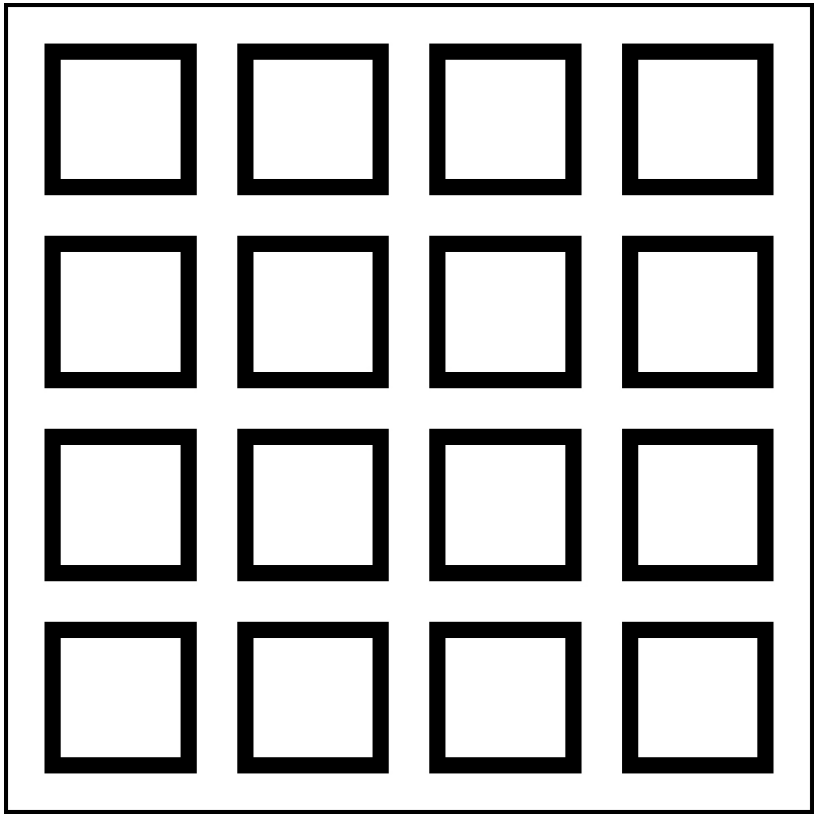
- Concepts are the ideas of abstractions that are formed as a result of categorizing data from a number of observations.
- In this model, the emphasis is on the learner determining the attributes of a concept that has been preselected by a teacher.


Bill
Max
Herman
Sam
19
18
17
16


GUESS WHO

QUARTO!

50	35
7	66
97	71
44	58
70	11



2	13
15	29
86	5
21	20
62	40

From *Beyond Monet* by Barrie Bennett

What is it?

Concept Attainment is an inductive process that helps bring meaning to concepts or helps construct concepts through the searching for common characteristics (called attributes). In Concept Attainment, the student compares like examples and contrasts them with unlike examples.

Those characteristics can be applied to distinguish examples of a concept from non-examples of that concept.

Based on the research of Jerome Bruner (1977)

What would the process look like?

According to Bruner, students figure out the attributes of a group or category that has been provided by:

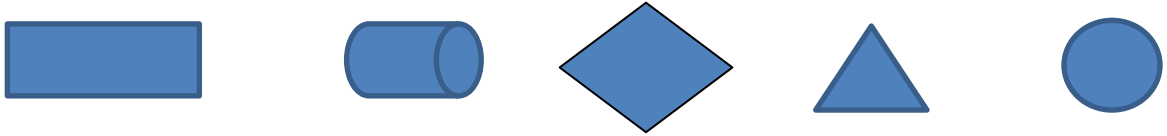
1) comparing and contrasting attributes of examples
2) making a hypothesis as to what the concept is.
3) applying their hypothesis to other examples.
4) generating their own examples of the concept.

The Concept Attainment Model

Positi

Concept is rectangle

- Four sides
- Contains all right angles
- Opposite sides parallel and congruent
- Geometric figure



Let’s try a few more:

Extension

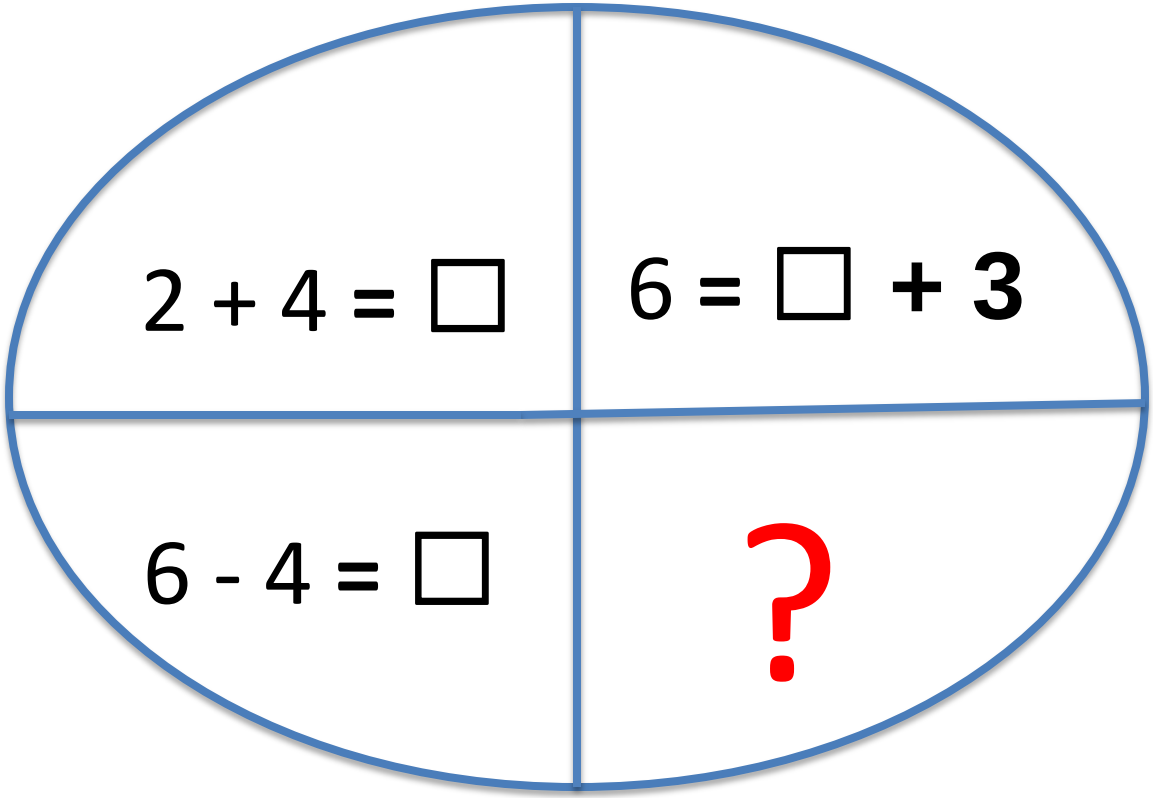
* Students identify additional unlabeled example
* Students generate examples
* Teacher confirms hypothesis, names concept

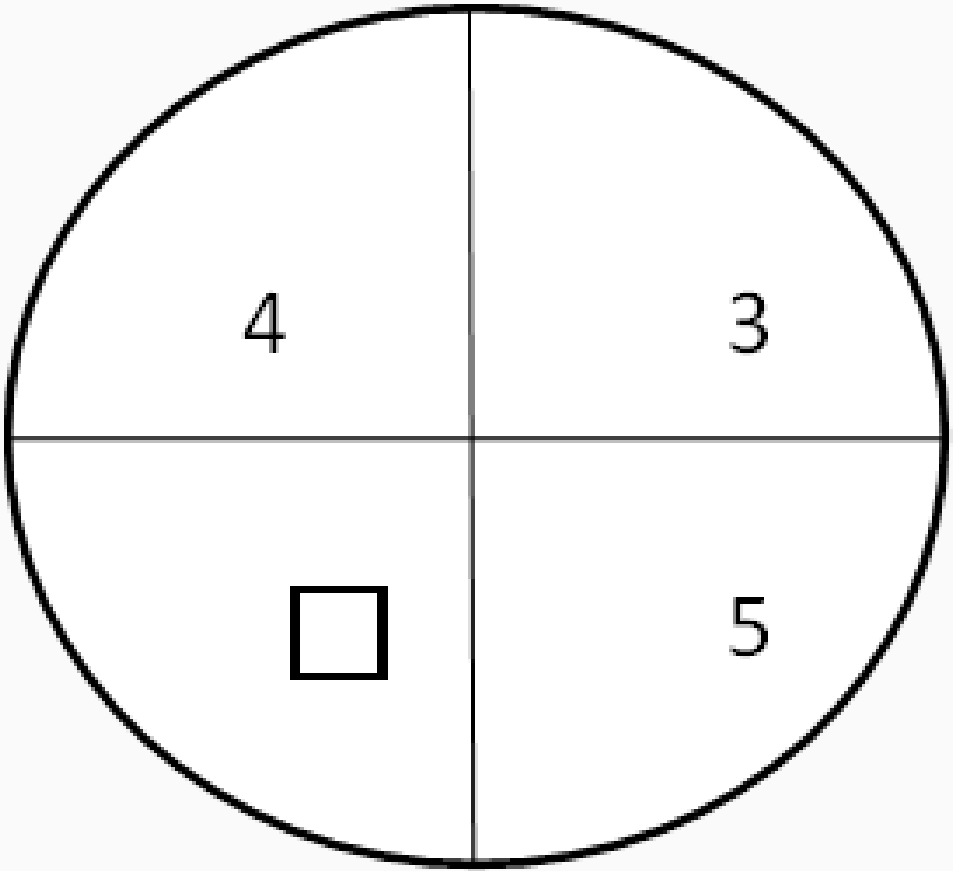
Before using the Concept Attainment Model…

Determine ahead of time

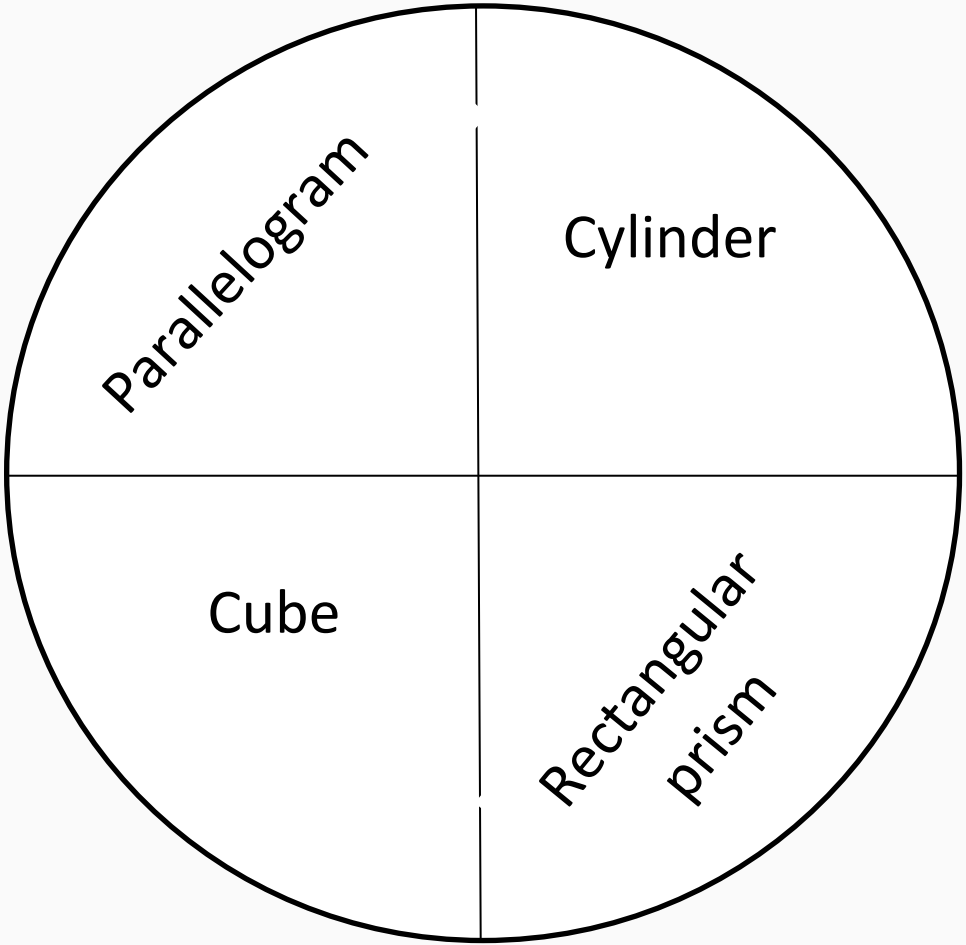
1. The name of the concept
2. The concept definition or rule
3. Conceptual attributes
4. Examples of the concept
5. Relationship of the concept to other concepts

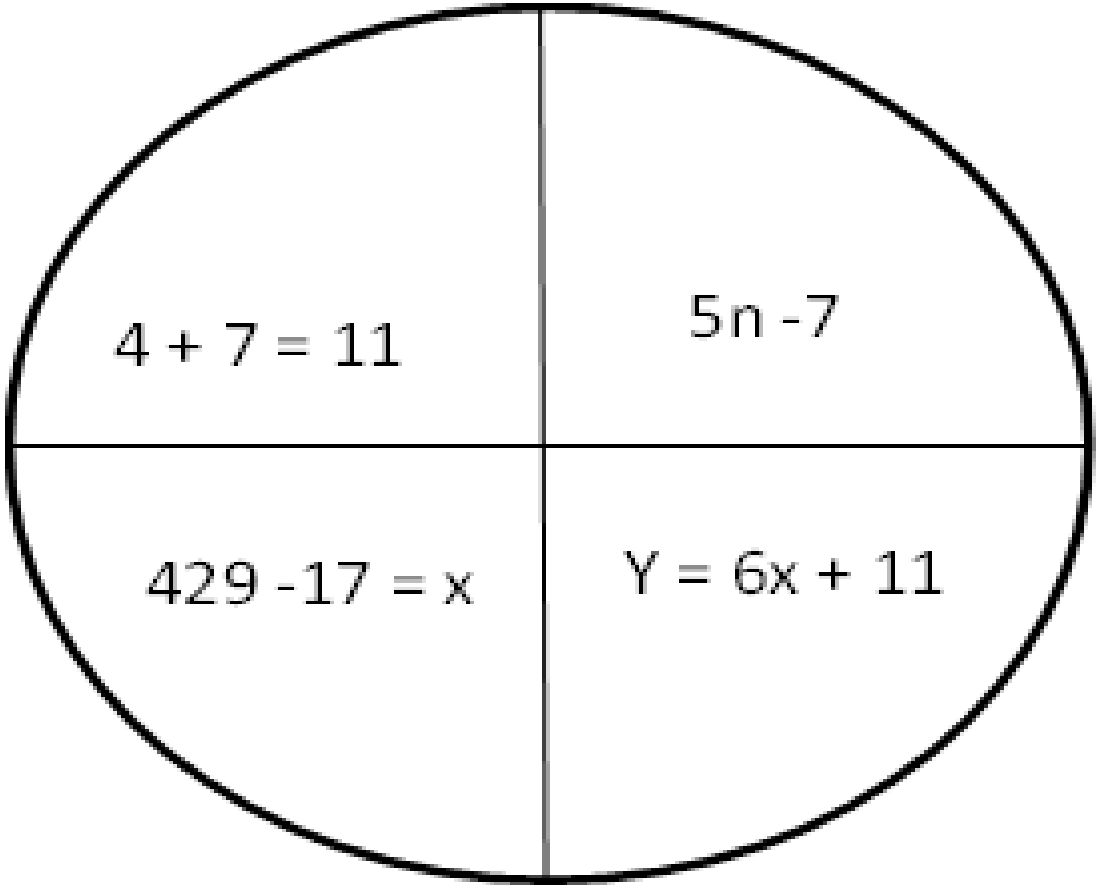
What could the “?” be replaced with?




4
3
5


2 2
W 2


Parallelogram
Cylinder
Cube
Rectangular prism

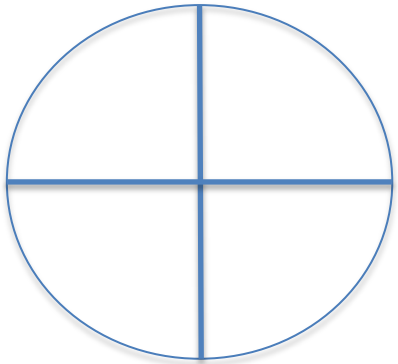

4 + 7 = 11
5n -7
429 -17 = x
Y = 6x + 11

The concept attainment strategy is powerful because it encourages students to become critical thinkers, and leads students to think about how they think (metacognition).

Resource

www.wodb.ca

Create a Concept Attainment Circle of your own…



Determine….

1. The name of the concept
2. The concept definition or rule
3. Conceptual attributes
4. Examples of the concept
5. Relationship of the concept to other concepts

Pass yours to your neighbor and have them tell you the solution(s). Switch and solve theirs. Then create one together.

Contact Information

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